

ABSTRACT OF THE DISCLOSURE

In order to increase the efficiency of large-capacity transmission, the continuity of divided signals generated by dividing a multiplexed signal is maintained and the original large-capacity multiplexed signal is restored. A signal dividing section divides a multiplexed signal to generate a plurality of divided signals in the STS or STM transmission interface format. A guarantee information adding section adds guarantee information for guaranteeing the continuity of the divided signals to each of the divided signals to generate transmission signals. A signal sending section sends the transmission signals via a transmission line in the transmission interface format. A signal receiving section receives the transmission signals. A signal restoring section restores the multiplexed signal by constructing the divided signals on the basis of the guarantee information.